

IN THE CLAIMS:

\ Please cancel Claims 2 and 27 without prejudice to or disclaimer of their subject matter.

\ Please amend Claims 1, 3, 4, 7-9, 11, 13, 15, 17, 19, 21, 23, 28, 29, 30 and 37-42 as follows:

C1 1. (Amended) An optical element comprises a reflection preventive light-shielding member comprising a metal at the periphery of an effective area of the optical element.

C2 3. (Amended) An optical element according to Claim [2] 1, wherein the reflection preventive light-shielding member is composed of one of a low-reflection chromium layer, and a multilayer film of a chromium oxide layer and a metallic chromium layer.

4. (Amended) An optical element provided with a reflection preventive light-shielding member comprising a ceramic material at the periphery of an effective area of the optical element.

A3
7. (Amended) An optical element according to [one of Claims] Claim 1 [to 6], wherein an alignment mark is provided on the light-shielding member.

8. (Amended) An optical element provided with a reflection preventive light-shielding member composed of a light-shielding ink and an alignment mark at the periphery of the optical element.

9. (Amended) An optical element according to [Claim 7 or] Claim 8, wherein the light-shielding member and alignment mark are provided by printing.

A4
11. (Amended) An optical element provided with an effective area and a reflection preventive light-shielding area in the periphery of the effective area, the reflection preventive light-shielding area blocking UV-laser light with a wavelength of 250 nm or less and generating no undesirable substances when irradiated by laser light.

A5
13. (Amended) An optical element provided with an effective area and a reflection preventive light-shielding area in the periphery of the effective area, the reflection preventive

A⁵ cond. light-shielding area blocking UV light and generating no undesirable substances due to irradiation by the UV light.

A⁶ 15. (Amended) An optical element provided with an effective area and a reflection preventive light-shielding area in the periphery of the effective area, the reflection preventive light-shielding area blocking radiation energy and generating no undesirable substances when irradiated.

A⁷ 17. (Amended) An optical element provided with an effective area and a reflection preventive light-shielding area in the periphery of the effective area, the reflection preventive light-shielding area blocking UV laser light with a wavelength of 250 nm or less and being resistant to the laser light.

A⁸ 19. (Amended) An optical element provided with an effective area and a reflection preventive light-shielding area in the periphery of the effective area, the reflection preventive light-shielding area blocking UV light and being resistant to the UV light.

A⁹ 21. (Amended) An optical element provided with an effective area and a reflection preventive light-shielding area in the periphery of the effective area, the reflection preventive

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cond. light-shielding area blocking radiation energy and being resistant to the radiation energy.

A¹⁰ 23. (Amended) An optical element provided with a reflection preventive light-shielding member comprising an inorganic material at the periphery of an optical element.

28. (Amended) An optical element according to Claim 26 [or 27], wherein the material comprises at least one of chromium, aluminum, molybdenum, tantalum and tungsten.

A¹¹ 29. (Amended) An optical element according to [Claims] Claim 26 [to 28], wherein the material is subjected to a reflection preventive treatment, the reflection preventive treatment comprises a laminated structure of a metal oxide layer on the light-shielding member.

30. (Amended) An optical element according to [Claims 26 to 28] Claim 29, wherein the metal oxide layer comprises at least one of silicon oxide and aluminum oxide.

A¹² 37. (Amended) An element according to any one of [Claim 1 to 35] Claims 1, 4, 8, 11, 13, 15, 17, 19, 21 and 23, wherein a diffractive surface is formed in said effective area.

38. (Amended) An element according to any one of [Claim 1 to 35] Claims 1, 4, 8, 11, 13, 15, 17, 19, 21 and 23, wherein said element is a diffractive optical element.

39. (Amended) An optical system having the optical element according to any one of [Claims 1 to 35] Claims 1, 4, 8, 11, 13, 15, 17, 19, 21 and 23.

Q¹²
40. (Amended) An illumination apparatus illuminating a face utilizing the optical system containing the optical element according to any one of [Claim 1 to Claim 35] Claims 1, 4, 8, 11, 13, 15, 17, 19, 21 and 23.

41. (Amended) A projection exposure apparatus for illuminating a pattern on a first subject by taking advantage of a light flux via the optical system containing the optical element according to any one of Claims 1 [to 35] , 4, 8, 11, 13, 15, 17, 19, 21 and 23, thereby projecting and exposing the pattern on the first subject on a substrate face with the projection optical system.

42. (Amended) A method for manufacturing a device, wherein the pattern on the mask is illuminated by taking advantage of the light flux via the optical system containing the

C₁₂
cond. optical element according to any one of Claims 1 [to 35] , 4, 8,
11, 13, 15, 17, 19, 21 and 23, the device being manufactured via
a development step after exposing the wafer face with the
pattern.

— Please add Claims 43-67 as follows:

--43. An optical element according to Claim 7,
wherein the light-shielding member and alignment mark are
provided by printing.

C₁₃ 44. An optical element according to Claim 43,
wherein the portions where the light-shielding ink does not
protrude.

45. An optical element according to Claim 4,
wherein an alignment mark is provided on the light-shielding
member.

46. An optical element according to Claim 45,
wherein the light-shielding member and alignment mark are
provided by printing.

47. An optical element according to Claim 46, wherein the portions where the light-shielding ink does not protrude.

48. A diffractive optical element comprising a light-shielding area at the periphery of an effective area of the diffractive optical element.

49. An optical system having the diffractive optical element according to Claim 48.

50. An illumination apparatus illuminating a face utilizing the optical element according to Claim 48.

51. A projection exposure apparatus for illuminating a pattern on a first subject by taking advantage of a light flux via the optical system containing the optical element according to Claim 48, thereby projecting and exposing the pattern on the first subject on a substrate face with the projection optical system.

52. A method for manufacturing a device, wherein a pattern on a mask is illuminated by taking advantage of the light flux via the optical system containing the optical element

according to Claim 48, the device being manufactured via a development step after exposing the wafer face with the pattern.

53. A diffractive optical element comprising a light-shielding member at a periphery of an effective area of the diffractive optical element.

54. An optical system having the diffractive optical element according to Claim 53.

55. An illumination apparatus illuminating a face utilizing the optical element according to Claim 53.

56. A projection exposure apparatus for illuminating a pattern on a first subject by taking advantage of a light flux via the optical system containing the optical element according to Claim 53, thereby projecting and exposing the pattern on the first subject on a substrate face with the projection optical system.

57. A method for manufacturing a device, wherein a pattern on a mask is illuminated by taking advantage of the light flux via the optical system containing the optical element

according to Claim 53, the device being manufactured via a development step after exposing the wafer face with the pattern.

58. An optical element comprising a reflection preventive light-shielding area at a periphery of an effective area of the optical element.

59. An optical system having the diffractive optical element according to Claim 58.

60. An illumination apparatus illuminating a face utilizing the optical element according to Claim 58.

61. A projection exposure apparatus for illuminating a pattern on a first subject by taking advantage of a light flux via the optical system containing the optical element according to Claim 58, thereby projecting and exposing the pattern on the first subject on a substrate face with the projection optical system.

62. A method for manufacturing a device, wherein a pattern on a mask is illuminated by taking advantage of the light flux via the optical system containing the optical element

according to Claim 58, the device being manufactured via a development step after exposing the wafer face with the pattern.

63. A diffractive optical element comprising a reflection preventive light-shielding member at a periphery of an effective area of the diffractive optical element.

64. An optical system having the diffractive optical element according to Claim 63.

65. An illumination apparatus illuminating a face utilizing the optical element according to Claim 63.

66. A projection exposure apparatus for illuminating a pattern on a first subject by taking advantage of a light flux via the optical system containing the optical element according to Claim 63, thereby projecting and exposing the pattern on the first subject on a substrate face with the projection optical system.

67. A method for manufacturing a device, wherein a pattern on a mask is illuminated by taking advantage of the light flux via the optical system containing the optical element